REMARKS

The Office Action dated November 22, 2005, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 10, 19, 24-25, 28, 31-32, and 38 have been amended to more particularly point out and distinctly claim the invention. No new matter has been added, and no new issues are raised that would require additional search. Entry of the amendments is respectfully requested because the amendments do not raise new issues, and because, in the alternative, the amendments place the application in better condition for allowance or appeal. Claims 1-38 are currently pending in the application, of which claims 1, 10, 19, 24, 28, 31-32, and 38 are independent. In view of the above amendments and the following remarks, Applicant respectfully submits claims 1-38 for consideration.

Clarification

Applicant respectfully submits that the OCR version of Applicant's response incorporated in the Office Action include numerous computer errors that were undoubtedly part of the OCR process used by the U.S.P.T.O. Applicant respectfully declines to adopt the OCR version to the extent that it varies from what was filed with the U.S.P.T.O. It is understood that the OCR version was included to aid the Applicant, and not to vary what the Applicant wrote.

Allowability

Applicant thanks the Examiner for the indication on page 46, paragraph 13, that "Applicant should change "oscillating circuit" in all the claims to – oscillator circuit – for allowability over the art." Applicant respectfully notes that such an amendment has been made, and therefore respectfully submits that all the claims are presently in condition for allowance. Accordingly, timely allowance of the claims is respectfully requested.

Rejections under 35 U.S.C. 112

Claims 33-35 were rejected under 35 U.S.C. 112, second paragraph, for indefiniteness. The Office Action asserts that a bias current source for supplying a bias current is misdescriptive because "the current that a transistor supplies is along its source drain path, and transistor 228 is supplying bandgap reference 226 and, negligibly, transistor 224 gate." The Office continues by asserting that "the "bias current source" 228 supplies a current but is not just the bias current, rather it includes the bias current as a component." Applicant respectfully traverses this rejection.

Applicant respectfully notes that transistor 228 is diode-connected. Thus, it can supply current from the node that includes the gate and at least one of the source and the drain. As shown in Figure 2, bias current 216 can be supplied by a transistor 228. The Office Action's point that transistor 228 can do other things besides supply bias current is

not germane. It is not required that Applicant claim every function performed by each element in each of the disclosed embodiments.

Rejections under 35 U.S.C. 102(b)

Claims 1-10, 12-14, and 16-32 were again rejected and claims 35-38 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. 6,166,670 of O'Shaughnessy ("O'Shaughnessy"). Applicant respectfully traverses this rejection.

Independent claim 1, upon which claims 2-9 depend, is directed to a noise reduction circuit. The noise reduction circuit may include a filter coupled to a gate of a current source for an oscillator circuit to filter a bias noise component into the gate. The noise reduction circuit may also include a degeneration circuit coupled to a supply for the current source, wherein the degeneration circuit reduces a gain within the current source.

Independent claim 10, upon which claims 12-14 and 16-18 depend, is directed to a system for reducing noise in an oscillator circuit. A filtering device having a first resistance and a capacitance to filter a bias current and coupled to a gate of a current source. The system may also include a degeneration device having a second resistance to reduce a noise component in a supply current at the current source.

Independent claim 19, upon which claims 20-23 depend, is directed to a method for reducing noise. The method may include filtering a bias noise component from a bias current flowing into a gate of a current source for an oscillator circuit. The method may

also include reducing a supply noise component from a supply current flowing into a supply of the current source.

Independent claim 24, upon which claims 25-27 depend, is directed to a method for reducing noise components. The method may include reducing a bias noise component by passing a bias current through a noise reduction circuit coupled to a gate of a current source to an oscillator circuit. The method may also include reducing a supply noise component by passing a supply current through the noise reduction circuit coupled to a supply of the current source.

Independent claim 28, upon which claims 29-30 depend, is directed to a circuit that may include an oscillator circuit to generate an output signal. The circuit may also include a current source to control the oscillator circuit. The current source may receive a signal derived from a reference signal to generate the output signal. The circuit may also include a noise reduction circuit coupled to a gate and a supply of the current source to reduce a noise component within the signal.

Independent claim 31 is directed to a circuit for reducing noise. The circuit may include filtering means for filtering a bias noise component from a bias current flowing into a gate of a current source for an oscillator circuit. The circuit may also include reducing means for reducing a supply noise component from a supply current flowing into a supply of the current source.

Independent claim 32 is directed to a circuit for reducing noise components. The circuit may include first reducing means for reducing a bias noise component by passing

a bias current through a noise reduction circuit coupled to a gate of a current source to an oscillator circuit. The circuit may also include second reducing means for reducing a supply noise component by passing a supply current though the noise reduction circuit coupled to a supply of the current source.

Independent claim 38 is directed to an oscillator circuit current source, including a filter, configured to filter a substantial amount of noise in a bias current, coupled to a gate of a current source for an oscillator circuit; and a degeneration circuit coupled to a supply for the current source, wherein the degeneration circuit reduces a gain within the current source.

It is respectfully submitted that the cited art of O'Shaugnessy fails to disclose or suggest all the elements of any of the presently pending claims.

O'Shaugnessy is directed to a self-calibrating current mirror and digital to analog converter. O'Shaugnessy, in Figure 3, describes a current mirror that may serve as a circuit that reduces the error due to device mismatch under certain conditions. The source of input current 318 is connected to the gates of three transistors (310A/312, 320A/322A, and 320B/322B). The transistors are arranged in order to provide a current mirror that reduces error due to device mismatch. O'Shaugnessy labels Figure 3, which contains the above-described circuit, as prior art.

Claim 1 recites "a filter coupled to a gate of a current source for an oscillator circuit to filter a bias noise component into the gate." O'Shaugnessy does not teach or suggest this element. O'Shaugnessy does not teach that any element of its described

circuit serves as a filter, and any structurally similar feature (such as O'Shaugnessy's capacitor 380) is not taught as being appropriately selected to filter noise, as noise is not a described or taught portion of O'Shaugnessy's circuit, as explained above. Additionally, one of ordinary skill in the art would know that the value selected for a capacitor depends on the function that the capacitor serves. There is no indication that O'Shaugnessy's capacitor is of an appropriate value to effectively filter noise, nor would one of the ordinary skill in the art select a capacitor with noise filtering in mind, because noise filtering is not suggested or disclosed in O'Shaugnessy.

The Office Action asserts that Applicant has not explained that O'Shaugnessy did not teach filtering noise. Applicant respectfully notes that the burden is actually on the U.S.P.T.O. to establish that the reference teaches what the Office Action asserts that it teaches. Nevertheless, Applicants respectfully explain O'Shaugnessy's failure to teach filtering noise briefly as follows. The word "noise" is not found in O'Shaugnessy. The word "interference" which is sometimes related to noise is not found in O'Shaugnessy. Even the word "filter" which is sometimes related to noise is not found in O'Shaugnessy. There is no description of noise in any of the figures of O'Shaugnessy. In short, Applicant respectfully submits that O'Shaugnessy has nothing to do with filtering noise.

The Office Action admits that O'Shaugnessy does not explain capacitor 380 at all. The Office Action, however, asserts that it one of ordinary skill in the art would have recognized that capacitor 380 would damp certain high frequency signals. The Office Action asserts that one of ordinary skill in the art would not have "dropped in a random

capacitor." Applicant respectfully submits that one of ordinary skill in the art would not have dropped in any capacitor, because O'Shaugnessy is not suggesting to anyone to go out and build a device of Figure 3. O'Shaugnessy provides Figure 3 in order to criticize it and to show what not to do in designing a self-calibrating current mirror and digital to analog converter.

The Office Action presents additional arguments that one of ordinary skill in the art would have recognized that capacitor 380 would serve to damp high frequency signals. Applicant respectfully notes that one of ordinary skill in the art would understand that the capacitor would serve to permit high frequency signals to pass from node 340 to node AVDD (and vice versa), and to block DC voltages from passing between node 340 and node AVDD (and vice versa).

The Office Action further asserts that it "is thus necessary that one of ordinary skill in the art measured the voltage changes between the power supply voltage and the current mirror voltage in view of the existence of capacitor and his understanding of how a capacitor works, to determine a capacitor value he judged optimal." Applicant respectfully disagrees. The capacitor is not indicated as being essential, crucial, critical, necessary, or even important to the design of the circuit. It is simply there. One of ordinary skill in the art would not waste time trying to optimize the value of a component that was so unimportant that it did not merit description by the author of the reference. Assuming for the moment (not admitted), that one of ordinary skill in the art read O'Shaugnessy and then decided to build the criticized circuit of Figure 3, one of ordinary

skill in the art would initially insert some capacitor (perhaps whatever capacitor was at hand) and see if the circuit functioned as intended. Since there is no teaching or suggestion that circuit would function poorly in the presence of (undisclosed, unrecognized) noise, and since O'Shaugnessy generally criticizes the circuit anyway, there is no indication that one of ordinary skill in the art would ever bother to experiment with different capacitors.

The Office Action states that "Ideally both the power supply voltage and the current mirror voltage are perfectly stable," and that "Any rapid variation was some kind of noise." Applicant respectfully submits that O'Shaugnessy does not teach or suggest that it is important that the power supply voltage and current mirror voltage be ideal, nor that rapid variations existed as a non-ideality. Accordingly, O'Shaugnessy does not suggest filtering rapid variations in order to more closely approximate ideality.

Assuming for the moment that O'Shaugnessy provided a filter (not admitted), O'Shaugnessy's filter is not taught as connected to an oscillator circuit. Indeed, O'Shaugnessy does not teach or suggest connecting the circuit to any actual output, because, as O'Shaugnessy puts it, the "circuit of FIG. 3 provides improved matching only over a **limited range** of current. If the current is too small, the circuit becomes **sensitive to device mismatches**. When current is too large, **insufficient supply voltage exists** to drive the output load." Col. 5. ll. 32-37. Thus, although O'Shaugnessy mentions that current mirrors can be used with balanced modulators, O'Shaugnessy does not suggest combining the circuit of Figure 3 with a balanced modulator. Rather the cited portion

regarding balanced modulators relates to a general description, as can be seen at Col. 1, ll. 29-35 ("In general ...."). Accordingly, O'Shaugnessy fails to teach or suggest at least these features of claim 1.

The Office Action responds that it is "elementary deduction that it was connected to something." Applicant respectfully submits that Figure 3 does not show the circuit connected to anything. Applicant respectfully submits that the written description of Figure 3 does not describe it as connected to anything. The written description of Figure 3 commences at col. 4, ll. 7 and continues to col. 5, ll. 37. There is also a brief description of Figure 3 at col. 7, ll. 5-7. Nowhere in that description is Figure 3 described as connected to anything.

The Office Action states that O'Shaugnessy "implied the connection of the Fig. 3 circuit to an actual output." Applicant respectfully disagrees. Items 328A and 328B are hypothetical outputs. Any implication that those hypothetical outputs should correspond to actual circuits is overcome by O'Shaugnessy's criticism of the circuit, namely that its improved accuracy "occurs with certain disadvantages and limitations." Additional negative comments with which O'Shaugnessy describes the circuit of Figure 3 provide additional reasons that one of ordinary skill in the art would not be motivated to combine the circuit of Figure 3 with an actual output.

The Office Action also states that O'Shaugnessy "suggests combining the circuit of Figure 3 with a balanced modulator BY mentioning that current mirrors can be used with balanced modulators." Mere information that current mirrors generally can be

combined with balanced modulators is not a suggestion to combine the criticized circuit shown in Figure 3 with an oscillator circuit. O'Shaugnessy does not suggest combining the circuit in Figure 3 with anything else. Although O'Shaugnessy depicts the circuit in Figure 3, it is to display its weaknesses and shortcomings, not to encourage its use. Figure 3 is labeled by O'Shaugnessy as Prior Art. O'Shaugnessy states that O'Shaugnessy's circuit provides mismatch error that is **significantly less** than the mismatch error of the Prior Art. Additionally, O'Shaugnessy is providing circuits, not for use in balanced modulators, but for use in digital to analog converters (DACs). O'Shaugnessy nowhere suggests using any of the current mirrors disclosed therein in conjunction with a balanced modulator. Accordingly, one of ordinary skill in the art would not be motivated to combine the circuit of Figure 3 with an oscillator circuit

The Office Action replies that because O'Shaugnessy states that prior art current mirrors were used in balanced modulators and Figure 3 is identified as a prior art current mirror, O'Shaugnessy suggests that Figure 3 was for a balanced modulator. Applicant respectfully submits that this is a logical error. O'Shaugnessy merely states a general use for current mirrors. Contrary to the Office Action's assertions, the entire paragraph beginning at col. 1, line 29 is a general description, not just the topic sentence of the paragraph.

The Office Action responds to O'Shaugnessy deprecation of the circuit of Figure 3, by responding that "one can criticize any circuit," and that "it must have been used to have been considered a 'prior art' device since if it was not used it was not in the art."

The Office Action later states that "the prior art is always said to have some weakness or shortcoming.... Such language is not meant to show that the prior art was not used." Applicant respectfully traverses this ground of rejection. Applicant submits that O'Shaugnessy did not criticize all of the circuits, and instead praised and promoted O'Shaugnessy's invented circuits. Additionally, even if the circuit of Figure 3 were used, the point of Applicant's argument was that there is no disclosure of the claimed combination which includes an oscillator circuit. Applicant submits that there is no evidence of record that the circuit of Figure 3 was ever used or intended for use with an oscillator circuit, and therefore one of ordinary skill in the art would not be motivated to combine an oscillator circuit with the circuit of Figure 3. Instead, the rejection consists of piecing together various portions of the reference in view of the present invention, which is inappropriate hindsight reconstruction.

The Office Action relies on the point that O'Shaugnessy states that "the current mirror is used with ... balanced modulators." "The current mirror" is a reference to the "In general, a current mirror ..." of col. 1, l. 29. O'Shaugnessy is not saying that any particular current mirror is used with a balanced modulator, nor is O'Shaugnessy saying that every current mirror can be used with a balanced modulator.

The Office Action includes an argument that the claim term "oscillating circuit" means "every circuit." (Office Action, p. 15.) Such a reading of the claim is improper, because it ignores the meaning that one of ordinary skill in the art would assign to the word in the context of the claims and written description. Nevertheless, to clarify without

changing the scope of the claims as they would have been understood in view of the specification as a whole, the claims have been amended to recite "oscillator circuit." Thus, it is respectfully submitted that this basis for rejection is moot.

Independent claims 10, 19, 24, 28, 31, 32, and 38 each have their own scope, as explained above. Claims 10, 19, 24, 28, 31, 32, and 38 however, have some similar recitations to claim 1. For example, they each recite "an oscillator circuit," (Claims 10, 19, 24, 28, 31, 32, and 38), and a noise reduction/filtering aspect ("filtering device" – claim 10, "filtering bias noise component" – claim 19, "noise reduction circuit" – claim 24, "noise reduction circuit" – claim 28, "filtering means for filtering bias noise" – claim 31, "first reducing means for reducing a bias noise component" – claim 32, and "filter, configured to filter a substantial amount of noise in a bias current."). Thus, claims 10, 19, 24, 28, 31, 32, and 38 should be allowed for at least the same reasons as claim 1.

The Office Action responds by asserting, in addition to what was already addressed above, that it was necessary that O'Shaugnessy's capacitor be designed to filter, and that it was necessarily the case that noise was filtered since noise includes high frequency components. At least with regard to claim 38, the latter rationale is evidently flawed, because the claim requires filtering of a substantial amount of noise. Additionally, as explained above, it was not necessary to design O'Shaugnessy's capacitor to filter.

Rejections under 35 U.S.C. 103(a)

Claims 1-14 and 16-32 were again rejected and claims 33-38 were rejected under 35 U.S.C. 103(a) as unpatentable over O'Shaugnessy in view of U.S. Patent No. 5,909,150 of Kostelnik et al. ("Kostelnik"). The Office Action takes the position that O'Shaugnessy teaches all the elements of the claims, except as to what provided the current at the source of the input current, and that Kostelnik disclosed that band gap bias circuits were known for this purpose. Applicant respectfully traverses this rejection.

O'Shaugnessy is discussed above. Kostelnik is directed to a system and method for improving the regulation of a supply voltage for a controllable oscillator using feed forward control techniques. Kostelnik indicates, at Col. 9, ll. 1-3 that a band gap bias circuit can be used to provide a bias current. The bias current i_{bias} in Kostelnik is being provided to a pair of transistors, M5 and M6, as shown in Figure 8. Figure 8 depicts a voltage control circuit 4003 which provides voltage to a current controlled oscillator circuit 1013 connected at node 4005.

The Office Action asserts that M5 and M6 are part of a current mirror circuit within 4003.

As discussed above, O'Shaugnessy fails to teach or suggest several elements of the claims of the present invention. Kostelnik does not remedy the above-described deficiencies of O'Shaugnessy.

O'Shaugnessy teaches away from the invention. As described above, O'Shaugnessy describes Figure 3 as prior art and describes its deficiencies. O'Shaugnessy even goes so far as to state at Col. 6, ll. 4-5 that the "current mirror structure[] disclosed in ... FIG. 3 [has] mismatch errors." O'Shaugnessy continues to deprecate the embodiment shown in FIG. 3, at Col. 6, ll. 26-27 by stating that "mismatch error of current mirror circuits produces numerous adverse effects." This is doubtless why, as explained above, although generic output loads are depicted, O'Shaugnessy does not suggest using the described circuit in combination with anything. Kostelnik is not directed to overcome the deficiencies described by O'Shaughnessy, nor is Figure 3 of O'Shaughnessy designed to overcome the deficiencies of Kostelnik. Thus, one of ordinary skill in the art would not find motivation, teaching, or suggestion to combine O'Shaugnessy with Kostelnik.

The Office Action asserts that the motivation to provide a stable bias for a current mirror is universal. There is, however, no teaching, motivation, suggestion, or other identified appreciation in the art that the bias of a current mirror was unstable and thus in need of correction. Sometimes the nature of an invention lies in identifying the problem. In the absence of a teaching of a problem, it cannot be obvious to solve the problem. Additionally, as explained above, even if there were some recognized problem that required a circuit to improve performance, and if one of ordinary skill in the art went and reviewed O'Shaugnessy, one of ordinary skill in the art would be taught away (by

O'Shaugnessy) from making the specific combination that the Office Action proposes, and therefore would (if at all) instead use the circuit that O'Shaugnessy says is better.

Even if O'Shaugnessy and Kostelnik could be combined (not admitted), the combination would still not disclose all the features recited in the claims. For example, such a combination would not teach "a filter ... to filter a bias noise component into the gate" as recited by claim 1, or the similar (though different) recitations of the independent claims (for example, "filtering device" – claim 10, "filtering bias noise component" – claim 19, "noise reduction circuit" – claim 24, "noise reduction circuit" – claim 28, "filtering means for filtering bias noise" – claim 31, "first reducing means for reducing a bias noise component" – claim 32). O'Shaugnessy's failure to provide these elements is explained above. Kostelnik only describes filtering high frequency noise on the node 4005, which is the output (not an input) of Kostelnik's voltage control circuit. Kostelnik does not disclose or suggest filtering noise that would otherwise be input to a current source for an oscillator circuit. Accordingly, the cited art of O'Shaugnessy and Kostelnik, whether taken singly or in combination does not teach or suggest all of the elements of any of the presently pending claims.

The Office Action notes that Kostelnik was not cited for filtering. Applicant has included the fact that Kostelnik does not remedy O'Shaugnessy's deficiencies with respect to filtering, simply to prove that Kostelnik does not happen to remedy O'Shaugnessy's deficiencies in that regard. Applicant appreciates the implicit admission

that Kostelnik does not remedy what Applicant has identified as O'Shaugnessy's deficiencies with respect to filtering.

Applicant notes that the previous Office Action did not respond to these arguments, but merely asserted that the art is full of current mirrors having stable reference current sources. The current Office Action merely reiterates the point and goes into it in further detail. The Office Action's response is not germane. There is no teaching, motivation, or suggestion to combine Figure 3 (the deprecated "prior art" of O'Shaugnessy) with any circuit, real or imagined. And O'Shaugnessy teaches away from any combination by its deprication of the circuit. The Office Action does not respond at all to the "teaching away" argument that Applicant has provided. MPEP 2144.05 (III) states "A *prima facia* case of obviousness may also be rebutted by showing that the art, in **any** material respect, teaches away from the claimed invention." (Bold added for emphasis). Accordingly, in view of Applicant's unrebutted arguments regarding teaching away, Applicant respectfully requests that this rejection be withdrawn.

Claims 1-10 and 12-32 were again rejected and claims 35-38 were rejected under 35 U.S.C. 103(a) as being unpatentable over O'Shaugnessy in view of U.S. Patent No. 6,803,829 of Duncan et al. ("Duncan"). Applicant respectfully traverses this rejection.

O'Shaugnessy is discussed above. Duncan is directed to an integrated VCO having an improved tuning range over process and temperature variations. In particular, Duncan relates to an integrated VCO that includes, in some embodiments, a substrate, a VCO tuning control circuit responsive to a VCO state variable that is disposed upon the

substrate, and a VCO disposed upon the substrate, having a tuning control voltage input falling within a VCO tuning range for adjusting a VCO frequency output, and having its tuning range adjusted by the tuning control circuit in response to the VCO state variable.

As discussed above, O'Shaugnessy fails to teach or suggest at least some of the elements of each of the claims of the present invention. Duncan does not remedy the above-described deficiencies of O'Shaugnessy.

Applicant withdraws the previously presented arguments regarding the availability of Duncan as a reference under 35 U.S.C. 103(c).

O'Shaugnessy teaches away from the invention. As described above, O'Shaugnessy describes Figure 3 as prior art and describes its deficiencies. O'Shaugnessy even goes so far as to state at Col. 6, ll. 4-5 that the "current mirror structure[] disclosed in ... FIG. 3 [has] mismatch errors." O'Shaugnessy continues to deprecate the embodiment shown in FIG. 3, at Col. 6, ll. 26-27 by stating that "mismatch error of current mirror circuits produces numerous adverse effects." This is doubtless why, as explained above, although generic output loads are depicted, O'Shaugnessy does not suggest using the described circuit in combination with anything. Duncan is not directed to overcome the deficiencies described by O'Shaughnessy, nor is Figure 3 of O'Shaughnessy designed to overcome the deficiencies of Duncan. Thus, one of ordinary skill in the art would not find motivation, teaching, or suggestion to combine O'Shaugnessy with Duncan.

The Office Action does not rebut the argument that O'Shaugnessy is not properly combined with Duncan. Accordingly, it is respectfully requested that this rejection be withdrawn for the reasons provided in MPEP 2144.05(III).

Rejections under 35 U.S.C. 102(a)

Claims 1-4, 6-10, 12-17, and 19-32 were again rejected and claims 33-38 were rejected under 35 U.S.C. 102(a) as being anticipated by Enriquez. Applicant respectfully traverses this rejection.

Enriquez relates to a current mirror with an embedded low-pass filter for subscriber line interface circuit applications. Enriquez's low pass filter is not designed to filter noise. Enriquez includes a low pass filter is to modify the transfer function of the current mirror so that the output current is equal to the frequency content of the input current below the cut-off frequency as defined by the time constant of the RC filter. The purpose of doing this is stated as "to lower the voltage supply rail bar ... from five volts down to ... three volts."

The Office Action asserts that because amongst the demands placed on SLICs is "low noise" that therefore Enriquez "explicitly taught to design for "filtering" in a "low noise" way. This assertion is not supported by Enriquez. The portion that the Office Action cites is a general background statement. "Noise" is only mentioned in the first two paragraphs of Enriquez. Enriquez, in the very brief description of Figure 2, only claims that "the effect of this RC network is to place an RC voltage divider between the

base 21 of the output transistor 20 and the base 11 of input transistor 10." Enriquez does not make any claim to effectively filter noise.

The Office Action also asserts that the stated purpose of Enriquez, "to lower the voltage supply rail bar ... from five volts down to ... three volts" is not the only purpose. The Office Action, however, does not provide any other purposes proposed by Enriquez.

The various limitations of the claims are discussed above. Each of the claims includes some element that is configured to effectively filter noise. As with O'Shaugnessy, nothing in Enriquez is designed to filter noise.

The Office Action takes the position that if the circuit actually filters noise, it does not matter (with respect to the claim language) whether that characteristic is disclosed. It is respectfully noted that although Enriquez mentions a number of performance requirements such as "low noise" but also "low power consumption," "accuracy," "linearity," "filtering," and "ease of impedance matching" to name a few. Enriquez circuit, however, is designed, not to meet every one of those requirements, but rather to "not only reduce[] implementation complexity, but also readily compl[y] with **reduced power** supply parameters of the SLIC."

The Office Action replies by arguing that Enriquez statement that SLIC must conform with various performance requirements "makes it clear that Enriquez did design to meet all possible requirements." Applicant respectfully disagrees. Enriquez does not claim a SLIC and is not directed to a SLIC. It is unrealistic to imagine that a current

mirror at a SLIC input will cause a SLIC to meet every one of its performance requirements.

With regard to claim 38, the Office Action does not consider that filtering a substantial amount of noise requires more than merely including a low pass filter into the circuit. For example, if a low pass filter is designed to pass frequencies below 40,000 KHz, but frequencies greater than 60 Hz are considered noise, such a low-pass filter does not effectively reduce noise. The frequencies provided are merely by way of illustrating the difference between filtering generally and reducing noise specifically, they are not limitations of the present invention.

Enriquez, however, does not teach or suggest filtering noise. Enriquez discloses lowering a voltage using an LPF. Accordingly, Enriquez does not teach or suggest at least those elements related to filtering noise.

Additionally, each of the claims recites an oscillator circuit. Enriquez is directed to a circuit that can be used in communication systems and components. The disclosure that the circuit relates to "communication systems and components" is not a teaching or suggestion to connect the circuit to every kind of communication system or component. It is not even a teaching or suggestion to connect the circuit to **any particular** kind of communication system or component. The only particular communication component for which the circuit is identified as useful is a subscriber line interface circuit (SLIC). A SLIC, however, is not an oscillator circuit. Accordingly, Enriquez does not teach or suggest at least this element of the claimed invention.

Additional rejections under 103(a)

Claims 1-10 and 12-32 were again rejected and claims 35-38 were rejected, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over Enriquez.

Some of the differences between Enriquez and the claimed invention are discussed above. Two areas that Enriquez does not teach or suggest is filtering noise, and providing a current supply for an oscillator circuit. It is respectfully submitted that there is no motivation provided by Enriquez to modify Enriquez to yield the claimed invention.

The Office Action cites col. 1, ll. 7-27 as describing the benefits of the invention. The cited portion is the field of the invention, and the background of the invention. In the summary of the invention, where benefits of the invention are more conventionally located, the benefits of the invention are described as relating directly to meeting the reduced power supply parameters of the SLIC.

Accordingly it is respectfully submitted that one of ordinary skill in the art would not have been motivated to modify Enriquez, because Enriquez does not provide teaching, motivation, or suggestion to modify itself, and there is no teaching, motivation, or suggestion in the art or otherwise within the knowledge of one of ordinary skill in the art to modify Enriquez.

Dependent Claims

Although the discussion above has primarily been directed to the recitations of the independent claims, it is respectfully noted that the dependent claims contain all the the limitations of their corresponding independent claim, as well as additional limitations. Thus, the dependent claims are patentable for at least the reasons the independent claims are patentable, and may be patentable for additional reasons, based on the additional limitations they include.

Conclusion

Accordingly, it is respectfully submitted that each of claims 1-38 recite subject matter that is neither disclosed nor suggested in the cited prior art. It is therefore respectfully requested that all of claims 1-38 be timely considered and allowed in view of the above amendments and arguments.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

Reg. No. 46,621

for Douglas H. Goldhush
Registration No.: 33,125

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

DHG/kmp